

# THE ATARI FORUM

*A Dialog For Atari Software Developers*

Volume I, Number 4

Sept.-Dec. 1988

## Opportunity for U.S. Developers

"Next year Atari is going to attack American markets," said Atari's Sig Hartmann. "Sam Tramiel has stated that in 1989 Atari will establish itself as one of the major computer companies in the U.S."

This year, Atari has been shipping computers primarily to European markets. "The ST is now a standard throughout Europe," said Hartmann. Atari's big push to gain the same presence in the U.S. is already underway. New dealer promotions with excellent retail pricing are being combined with regional advertising. And Atari's sales staff is signing up new dealers, much to the delight of developers.

### Developers Can Profit in Europe

Still, it may take some time before Atari's installed base in the U.S. matches that of Europe. Developers can maximize returns on their investment in Atari by marketing their products in Europe markets. Atari subsidiaries in the United Kingdom, Germany, and France have set up their own software distribution channels. Atari would like to talk to U.S. developers about marketing U.S. software through these channels.

"There is a need for good software in Europe," said Hartmann. Even English-only products from American developers can flourish, due to the size of the European market and high quality standards. "I would like to talk to developers personally about marketing opportunities overseas and help them sell their products in Europe." Call Sig Hartmann at (408) 745-2906.

Atari needs the support of its developers, now and for future products. By offering opportunities through European subsidiaries, Atari and its developers can continue to forge a strong partnership that's good for business on both sides.

### Developer's Conference

The long-awaited Atari Developer's Conference has been slated for January 29-30-31. It will be held near Atari headquarters in San Jose, California. Further details will be available soon.

## Atari Begins U.S. Market Push

Atari's attack on the U.S. computer market is happening! Atari launched a fullscale marketing assault on America at the Fall 1988 Comdex show, with new products, sales, and marketing programs. Atari's Comdex exhibit was its largest ever, occupying the 6,000-square foot Gold Room at the Las Vegas Convention Center.

Atari is reentering the U.S. marketplace, and the Comdex show, held November 14-18, provided the perfect opportunity for the company to make a statement to its dealers, developers, and the industry. Atari showed such exciting new software packages as DeskSet II and UltraScript, and high-tech hardware like the MEGAFILE 30 and MEGAFILE 60 high-capacity disk drives, the Atari MS-DOS personal computers, and the Atari Transputer Workstation.

At a meeting with developers and dealers, Atari President Sam Tramiel stated that in 1989, Atari will establish itself as one of the major computer companies in the U.S. The DRAM shortage has lessened, allowing increased production. The promotional program for dealers which commenced in September has gained momentum, leading the way to increased sales. Atari is signing up new dealers daily and upgrading existing dealers to carry MEGA products in addition to the 520 and 1040ST.

For Comdex, Atari amassed a full line-up of software solutions for business, desktop publishing, CAD, graphics, MIDI, education, communications, and

*continued on page 2*

## In This Issue

Atari Announces UltraScript.....	2
New Products.....	2
Q & A.....	3
New Online.....	3
Atari Dealer Promotions.....	4
Best of the Boards.....	4
Conference with Sam Tramiel.....	7

## Atari Announces PostScript Compatibility for SLM804 Printer

Atari announces UltraScript, a new Postscript-compatible page description language interpreter and software raster image processor for the Atari SLM804 laser printer and MEGA 2 or MEGA 4 systems. SLM804 printers bundled with UltraScript will be available before the end of the year, for approximately \$200 more than the current list price.

UltraScript uses font scaling technology that provides a variety of type that dramatically increases the versatility of the Atari Desktop Publishing System. Type is treated as a vector image and can be manipulated, scaled or rotated.

UltraScript comes with 16 fonts, including Lucida, Lucida Sans, Lucida Typewriter (roman, bold, italic, and boldface italic versions), Lucida Symbol, Lucida Hebrew, and Lucida Hebrew Typewriter. The Lucida family was specifically designed to take advantage of the laser marking engines. Lucida has recently been licensed by Adobe for use with Postscript.

Two font packages will be available with UltraScript, providing all the Apple LaserWriter II fonts licensed by Adobe from ITC and Linotype for Postscript. These fonts include Helvetica, Courier, Times Roman, Palatino, Avant Garde, Bookman, New Century Schoolbook, Souvenir, Garamond, Zapf Chancery, Zapf Dingbats, and Symbol. Additional font packages will become available in the future.

A number of software packages for the Atari are Postscript-compatible and may be used with the SLM804 and UltraScript. Files could also be imported from non-Atari computers. UltraScript includes a program interface that allows developers to provide applications with the ability to print Postscript files without user intervention.

UltraScript was developed for Atari by the Santa Clara, CA-based Imagen, a subsidiary of QMS.

## New Products

### MEGAFILE 30

Atari's MEGAFILE 30 offers the convenience of high-capacity disk storage for MEGA or ST computers. Designed like Atari's new MEGAFILE 20 to fit with the MEGA's processing unit, the new drive offers a full 30 megabytes of memory. MEGAFILE 30s are currently being shipped in place of the MEGAFILE 20 in the MEGA4 Desktop Publishing package, at no additional cost.

## Atari Begins Push at Comdex

*continued from page 1*

entertainment. The Atari computer product line was displayed with the work of over 50 developers. Continuous product demonstrations took place on a stage at the center of the Gold Room.

**Desktop Publishing.** Atari showed DeskSet II, a professional-level desktop publishing system that offers flexibility and versatility in working with text and graphics. Atari also showed UltraScript, the revolutionary new Postscript emulator for the MEGA 2 or MEGA 4 and Atari SLM804 laser printer. UltraScript enables the Atari to produce high-quality type and process Postscript files from other systems.

**Computer Systems.** At Comdex, Atari demonstrated the Atari Transputer Workstation (ATW). This powerful computer is based on one of the world's fastest processors, the Inmos T800 transputer. Atari has combined processor power with a high-resolution graphics subsystem to produce a low cost but high specification general purpose workstation. The ATW will exploit the potential offered by both parallel processing and the use of multiple processors. The speed and power of the system will make it suitable for applications such as desktop publishing, simulation, macro modeling, robotics, and speech synthesis. The high specification video output makes the ATW good for image processing, CAD, and TV and film work. Initial shipments of the ATW have already been made to developers. The price of the ATW is targeted below \$10,000.

Atari also demonstrated its new line of MS-DOS compatible machines. The PC4 is based on the 80286 microprocessor and is IBM PC/AT-compatible. The PC5 features an 80386 processor and OS/2 compatibility. These machines are targeted to begin shipping in the U.S. in the first quarter of 1989.

### SFP004 Math CoProcessor Boards

The SFP004 Math CoProcessor board is now shipping to developers in limited quantities. Write to Cindy Claveran at Atari Corporation to obtain pricing and order the product.

See the May 1988 issue of *The Atari Forum* for more information on the coprocessor. Address all letters of inquiry to Atari Corporation, 1196 Borregas Avenue, Sunnyvale, CA 94086, Attn: Cindy Claveran.

### Developer Kit Upgrade

This is your last chance to receive your developer kit upgrade for \$20! Orders will be filled only through January 15, 1989. Refer to the July/August 1988 issue of *The Atari Forum* for information on the upgrade's contents.

## Question & Answer

compiled by John Feagans  
Director of Software Technology

Here are the latest questions from the Atari developers mailbag as answered by John Feagans. Leave questions on CompuServe for PIN 70007,1072 or GO ATARIPRO for Atari developer SIG information.

### BIOS

**Q:** I have a program which works fine on my old 520 but does not work correctly on my MEGA with the new ROMs. Briefly, the problem is this--to save processor time I am switching the mouse to absolute mode and requesting its position every vblank. The code enclosed worked fine but on the new ROMs the mouse does not get reset to 0,0 and it moves in an erratic way.

**A:** Here is my summary of the code:

1. Save A1.
2. Do a bunch of stuff which in the meantime clobbers A0.
3. Restore A1.

The old ROMs were saving and restoring registers needlessly, and so to save the overhead of the additional pushes and pops, the new ROMs eliminated these instructions. What the above program did was to clobber a register that previously was restored by the calling function. Whenever you write ISRs or mouse handlers be sure to save and restore all the registers that you are using.

**Q:** I have to do three assembler routines to get the IKBD packet. My routines for the mouse and joystick work perfectly, the packet pointed by A0 is set like it should be when mouse or joystick are moved. But the keyboard routine doesn't work. Following the Atari developer's guide, the IKBD must send a packet each time a key is hit. But the packet is never modified. In fact the statvec vector routine is never called! (The ikbdsys vector routine is called, but the Atari guide gives no information about the way to use it...) Why doesn't the statvec vector work correctly? How can I get the statvec packet when a key is hit?

**A:** The statvec routine is initialized to point to an RTS and is never used by the BIOS. That is why your routine is never getting called. The IKBD sends two types of packets for a key strike. The first is a make code and the second is a break code. If your program sits there monitoring packets, not much will appear to be happening. That is because the data is not sitting in any visible registers--the packets are built from several characters and there may be characters unprocessed waiting in the ACIA. The ikbdsys vector is called when there are characters waiting on the ACIA. The ikbd handler has several state variables and parses out the ikbd packets and calls the appropriate subsystem vectors.

### AES

**Q:** Is there a way to position the text cursor inside an editable text field before calling the form\_\_do?

**A:** There is no way to pre-position the cursor in an editable text field. The ob\_\_spec field in the object points to a TEDINFO structure which contains a pointer to the place where the data gets stored. I generally allocate a string and set the pointers to it rather than using valuable resource file space for the data. There are several example programs in the data libraries and upload areas of both GENIE and Compuserve.

### Development Tools

**Q:** How do you include inline assembler in a C program using the Atari Developer's Kit?

**A:** This is a perennial question and I am repeating it for the benefit of those who may not have seen the answer before. There are two ways to do this depending on the number of lines to enter. If you have just a line or two to do then the asm() function is the one to use:

```
asm(" trap #1");
```

One assembler statement is included per asm(). The second way to do it is to create a small file and allow the linker to link it to your C program. A last word of advice--the Alcyon compiler adds an underscore to the beginning of your C labels. Alcyon labels are unique to 8 places and counting the underscore that means you must have uniqueness to 7 characters.

### VDI

**Q:** There are many bindings for the AES which I must include with my C programs but there does not appear to be a corresponding binding VDIBIND.H. Am I missing it from my developer's kit?

**A:** VDIBIND.H is not necessary because all functions return an integer value. There is not a problem with using the VDI functions--all are defined in the VDIBIND object library.

## New Online

The following files for developers are new this month in data library 7 (for registered Atari Developers only) in the Atari Developers SIG on CompuServe and on GENIE in Libraries 3 and 4.

**APPI.DOC** The Atari Page Printer Interface document, containing information for writing to the DMA printer controller.

**SALAD.ARC** SALAD is the sequel to the "Long-Awaited Line-A Document," and includes more information, such as negative Line-A variables.

**INTERFAC.ARC** This is the source code to accompany the article "Accessories, Pop-Ups, and Main Applications," in the July/August 1988 Atari Forum newsletter.

**IMG.TXT** This is the same IMG file format as in the currently shipping developer's kit. If Appendix I in your kit has four file formats (RLE, extended RLE, raster encoding, raster r in encoding), then you need this document.

**AESBIND.ARC** New AES bindings with form\_\_button and form\_\_keybd; includes documentation.

## Atari's Fall Dealer Promotions

Atari announced its new Fall promotion last month, offering consumers incredible deals on Atari computer systems and increasing advertising dollars for dealers. Atari is also signing up new dealers daily and upgrading existing dealers to carry MEGA products in addition to the ST.

Atari Computer's new fall promotions feature a pricing and regional advertising campaign for the 520STFM, MEGA 2 and Atari Desktop Publishing systems. Response to the promotion has been good. "Overall, the promotion has been meeting or exceeding our sales expectations," said Mike Dendo, vice president of sales. "As a result of the MEGA 2 promotion, our dealers have been able to upgrade many current customers to the more powerful machine. They also have been selling more to the power-oriented home user and the small business person."

### 520STFM

Atari is currently offering the Home Education package, featuring the upgraded 520STFM, a color monitor, two Bentley Bear educational titles, Atari's Home Planetarium, and a sophisticated color graphics program for a suggested retail price of \$849.95. A monochrome system, including two games and Microsoft Write, is \$649.95.

All 520STFMs currently shipping have double-sided internal floppy disk drives. Now all ST floppy drives can read and write 720K disks.

### MEGA 2

The MEGA 2 promotion offers a monochrome system for only \$1299 suggested retail, for a limited time. "The MEGA 2 is a very strong product and a very strong value," said Dendo. "Atari is providing dealers with a program that addresses the price/performance needs of the customer."

### Desktop Publishing

In a continuing promotion for Atari Desktop Publishing Systems, a bundle including a monochrome MEGA 2, SLM 804 laser printer, Microsoft Write, a VT-100 terminal emulation program, and LDW Power, a Lotus-like spreadsheet, retails for a suggested \$3095.

A monochrome MEGA 4 Desktop Publishing Package includes the MEGAFILE 20 20-megabyte hard drive, a terminal emulation program, and Timework's Desktop Publisher ST, for \$4395 suggested retail.

All promotional pricing continues through December 24, 1988, with the exception of the MEGA 2 system. The \$1299.95 price expires November 30, 1988.

## Best of the Boards

*compiled by J. Patton  
Atari Developer Support*

Captured threads this period span Compuserve, GENie, and usenet (the network accessed through college, government, and industry Unix mail and some public BBSs). Messages range from implementing GEM functions to a frank discussion of supervisor mode to useful code fragments. Most threads cover a variety of topics under a general header and these messages illustrate their extent.

### GENIE

*From the GENie programming roundtable is a conference which begins with a question about redrawing after acc's, ends up with an implementation of WF\_NEWDESK.*

J.IRVIN1 [Jarrell]

Uh, hmm... I seem to be having a problem with some desk accessories vs. my program. Both the old and new control.acc from Atari, and a few other desk acc's, leave behind a grey 'shadow' when they are closed. If all desk accessories did this it would make more sense to me, but most of them do properly close and blit back whatever they covered up. I am using Mark Williams C version 3, and using their resource editor. I am simply drawing a main menu and one other object, not opening a virtual workstation or creating any windows, i.e.:

```
appl_init();
rsrc_load("test.rsc");
rscr_gaddr(0, TOPMENU, &menu_addr);
graf_mouse(ARROW, &nowhere);
graf_mouse(M_OFF, &nowhere);
rscr_gaddr(0, FORM, &obj_addr);
form_center(obj_addr, &x, &y, &w, &h);
objc_draw(obj_addr, 0, MAX_DEPTH, x, y, w, h);
menu_bar(menu_addr, 1);
graf_mouse(M_ON, &nowhere);
evnt_keybd(blah, blah, ...);
appl_exit();
rscr_free();
exit(0);
```

As I understand it, my program is not responsible for the desk accessories, so what gives? I am assuming that each desk accessory may either:

Use the forms library and therefore use form\_dial to save and blit back whatever they cover up (nice, polite) or—

Open a window, not saving anything they cover up, and expect the application to handle all screen redraws (grumble).

SO, am I forced to open a window just so that I can get the WM\_REDRAW message so that I can redraw my object when a windowed desk acc exits? (This is kind

*continued on next page*

## Best of the Boards

*continued from previous page*

of a drag only because it takes a noticeable amount of time to redraw my object) OR ... am I missing something here ?

Jarrell Irvin

### ALANPAGE

GEM desk accessories are not required to blit back what they cover up. All `form_dial` does is cause a redraw message to be sent. If you are drawing a dialog box or other object directly on the desktop, then you will not get a redraw message. Instead, the GEM desktop gets the redraw message and then redraws the grey background (green on a color monitor) right on top of your dialog box.

If you open up a window and draw your box inside the window, then you will get a redraw message. It's also possible to make an object part of the desktop itself, but I have not tried this myself and don't know the details of how to do it.

Alan

*The desktop doesn't really redraw anything while an application is running—the AES does. The desktop is "swapped out" while applications run.*

—Ken Badertscher  
Atari Corporation

### DOUGH

If you're just displaying a form on the desktop, then you will probably be better off redefining the desktop background to include your form, as Alan suggested. It really is quite simple. Just go to the RCS, create a large box with a suitable fill pattern. Then, place your form inside of it. You must make the desktop box big enough to cover the entire screen, less the menu bar, and I've found it easiest to get the screen size from the extended inquire function or the XBIOS call `getrez`, and directly adjust the sizes within my program. This allows for resolution independence with only one resource file. To inform the desktop program of the change, use a `wind_set` call with the `WF_NEWDESK` parameter and supply it with the address of the form. Now, the desktop program will handle all redraw messages! Before your program exits, be sure to again call `wind_set` with `WF_NEWDESK`, this time supplying the value 0L for the tree address. This is undocumented but necessary to inform desktop to use its original background, which is important if the user runs the program from a shell other than the desktop. Oh, I should say the menu bar itself is two pixels higher than the default character cell height for the given resolution. Hope this helps...

Doug

### A.HAMILTON1 [Alan H.]

An addendum to the above: The `wind_set()` call does not draw the new desktop initially. You have to `objc_draw()` it yourself, or send a redraw message to the screen manager via `form_dial()`, with the entire screen as the area to refresh.

If you are using `form_do()`, you don't need to worry about what accessories are doing, since `form_do()` takes control of the computer and won't allow the menus to drop down.

Alan

*The one thing missing from this discussion is a good way to get the screen size for the form that you use to replace the default desktop. The methods described by Doug H. rely on undocumented features that may not be supported in future TOS versions:*

- Using `Getrez` and adjusting the object size yourself makes your program depend on hardware configurations that you know about. Future hardware enhancements (e.g. large screen monitors) will cause problems with this scheme.

- Using the screen values from the extended inquire (or from the `v_opnuwk` call) means that you are relying on the AES to redraw the menu bar over your `WF_NEWDESK`'ed form.

The recommended solution is to use `wind_get` using the desktop window handle to get the correct dimensions:

```
int      x,y,w,h;
OBJECT   *new_object_tree;
/* get correct dimensions for new desktop object */
wind_get(0, WF_WORKXYWH, &x, &y, &w, &h);
/* set object size and draw it */
objc_change( new_object_tree, 0, 0, x, y, w, h, 0, TRUE );
/* replace the desktop with your object tree */
wind_set( 0, WF_NEWDESK, new_object_tree, 0L );
```

*which will give you the working dimensions (area sans menu bar) of the "base" window - the desktop. You can then use those dimensions to set the size of the object which you are using to replace the desktop, with the assurance that your code will work on new hardware and new OS software.*

—Ken Badertscher  
Atari Corporation

### COMPUSERVE

*From CIS to Atari the topic is Calling GEM in supervisor mode. (#: 543 - 1061 S7ATARI Reg. Devel.)*

Fr: Stefan Daystrom @ Hybrid 76237,562

To: Julius Oklamcak (ATARI) 70007,1070 (X)

I read or remember somewhere that your application shouldn't be in Supervisor and call GEM...

*continued on next page*

## Best of the Boards

*continued from previous page*

My programs (in 4xForth) run in super mode from beginning to end. That seems to work fine, as long as you allocate some user stack (about 256 bytes seems way more than enough, I've found 128 even to be quite sufficient) separate from your super stack as some GEM calls (such as `appl_init` and `fsel_input`) put stuff on the user stack regardless of which mode you're in when you call them (don't ask me why!).

Fm: John Feagans (ATARI) 70007,1072  
To: Stefan Daystrom @ Hybrid 76237,562 (X)

Could you be more specific where you read this info about super mode? It is a fact that if you enter the AES in super mode you may not still be in super mode upon return.

Fm: Stefan Daystrom @ Hybrid 76237,562  
To: John Feagans (ATARI) 70007,1072 (X)

I didn't read about always being in super mode, I do it! That's the way 4xForth works, and I and many programmers I work with have patterned both Forth and assembly and C programs after that manner. The switch to super mode is done very early in the program (in C, in the init segment) via the GEMDOS call, and it simply stays that way forever. FORTH requires this as it is not just a language but a development environment, and partially substitutes for a SID-style debugging program. I have never had a problem with finding myself not in super mode upon return from an AES call. The only problems I have had were if I didn't maintain a small user stack when calling AES, even if in super mode when I made the call, and if I didn't allocate that users stack within my program (the new TOS's `fsel_input` can clobber the user stack if you simply inherit the one at the top of memory that the system gives you).

Fm: John Feagans (ATARI) 70007,1072  
To: Stefan Daystrom @ Hybrid 76237,562 (X)

I have no idea how making AES calls while in super mode could ever work. The AES pays no regard to the current state of super mode when it restores things. I stand corrected on the documentation--you have to read between the lines. On page 39 of the old hitchhiker's guide it says "DRI hasn't bothered to document this function yet." The function was Trap #1 function 0x20. They did not document it in GEMDOS because they knew it wouldn't work right with AES calls.

Fm: Stefan Daystrom @ Hybrid 76237,562  
To: John Feagans (ATARI) 70007,1072 (X)

"I have no idea how making AES calls while in super mode could ever work. The AES pays no regard to the current state of super mode when it restores things."

Sure it does! It returns with an RTE, doesn't it? A TRAP put the SR on the stack and an RTE pops it back off. And the SR contains all the necessary information (including whether the user was in super or user mode) to get things back to the right place.

Fm: John Feagans (ATARI) 70007,1072  
To: Stefan Daystrom @ Hybrid 76237,562

The official Atari position is do not make AES calls from super mode. You may do so at your own risk.

*Derek Mui sez: It is not recommended to make any AES calls when the program is in supervisor mode because there is the potential danger of corrupting some data.*

*First, there is a design issue. The AES always assumes the caller is in user mode. It never tries to distinguish if the AES call is being made from supervisor mode or user mode. So, there isn't any function to preserve the user stack if the call is being made from user mode.*

*Secondly, the AES trap handler will try to save some register values onto the user stack. It could be a problem if the program is running in supervisor mode all the time and never sets the user stack to the proper area. In this case, the system could get a bus error or address error. Things could get worse if the user stack belongs to some other sleeping process and we are writing something into its area. By the time that process is waking up, it may be getting garbage from its stack.*

## USENET

*A contribution originating from usenet: How do you detect warmboot? (Newsgroups: comp.sys.atari.st)*

From: apratt@atari.UUCP (Allan Pratt)

In article [2003@kalliope.rice.edu] bro@titan.rice.edu (Douglas Monk) writes:

How can you tell in a program in the auto folder if it is being run after a coldboot or a warmboot?

And I answered:

The only appropriate way is for the first incarnation of the program (the one which ran after a cold boot) to leave its fingerprint somewhere that the second incarnation--after the warm boot--can find it.

After this sentence, I got lost in something about `_memtop`... I should have said this:

The program looks for its cookie first, to see if it has run before. There's code for doing that below. If it doesn't find its cookie, it does the "first incarnation" stuff below. If it does find the cookie, it does the "second incarnation" stuff.

The first incarnation of a program does whatever it needs to do on coldboot, then leaves a magic cookie around to tell later incarnations that this stuff has been done. One sure-fire(\*) way to protect memory from

*continued on next page*

## Best of the Boards

*continued from previous page*

subsequent erasure (until another cold boot) is to move `__memtop`.

During the first run, after cold boot, move `__memtop` down by the size of whatever you want to be reset-survivable. Include in that space your magic cookie. The kind of magic cookie I suggest has two longwords: one is a pointer which points to itself, and the other is a magic number which you should strive to make unique for all applications:

```
magic equ $38371656 ; random, hopefully
                        unique ID.
```

```
; a0 contains the address where we will put our
cookie.
```

```
move.l a0,a0)
move.l #magic,4(a0)
```

After moving `__memtop`, you must cause a reboot. The best way to do this is to find the OS HEADER: its address can be found at `__sysbase`. In the header, you'll find the address of the reset handler at offset 4. Go to supervisor mode and jump there for a reset.

(\*) This is only sure-fire assuming other programs don't come along and move `__memtop` back up. If other programs move it DOWN to reserve even more memory for themselves, that's okay.

The next incarnation of your program will find the cookie, and do the things it needs to do when it knows the RAM is already reserved.

Finding the cookie consists of looking through RAM starting at what it finds at `__memtop` and going until it runs out of RAM (and gets a bus error). This will take a while because you don't get bus error until you pass 4MB. Sorry. Here's some code which will do what is necessary.

```
__memtop equ $436
__sysbase equ $4f2
; run this in super mode to find the cookie style
described above
find_cookie:
    move.l 8,a1 ; save old bus err handler
    move.l #.buserr,8 ; install our new one
    move.l __memtop,a0
.loop: cmp.l (a0),a0
      bne.s .nomatch
      cmp.l #magic,4(a0)
      beq.s .match
.nomatch:
    addq.l #2,a0
    bra.s .loop
.match: move.l a1,8 ; restore bus err handler
      move.l a0,d0 ; return cookie match address
                        in d0

rts
; got a bus error:
; means we failed to find our cookie before running
out of RAM
.buserr:
```

```
addq.l #14,sp ; clean off the exception frame
move.l a1,8 ; restore old bus err handler
moveq.l #0,d0 ; return zero for failure
rts
```

```
; run this in super mode to cause a warmboot
```

```
cause_warmboot:
    move.l __sysbase,a0
    move.l 4(a0),a0
    jmp (a0)
```

No warranty is expressed or implied. This technique might take some tuning. Use at your own risk. Your actual mileage may vary.

Opinions expressed above do not necessarily reflect those of Atari Corp. or anyone else.

—Allan Pratt, Atari Corp.

...ames!atari!apratt

## Sam Tramiel Online

*Atari President Sam Tramiel conducted a live conference on CompuServe last month, with online attendance of about 100 users. Mark Jansen, technical editor, typed for Sam Tramiel. The conference was moderated by CompuServe SysOp Ron Luks.*

*At the conference, Sam said Atari would begin shipping in earnest to the U.S. market in early 1989, including the ST, MEGA, Atari's line of PC-compatibles, and the newest products, such as the Atari Transputer Workstation (ATW, formerly known as the Abaq). The following is a portion of the conference.*

*(Richard Mataka) As you know, there are only a few US publications supporting the ST. Now Compute ST has decided to no longer publish and with the questionable support from Atari, Word Perfect Corp seems to have put their product development on hold. Also other software third-party companies are not supporting the ST. How will you convince these companies and others who may start a company to support the ST? What kind of incentives will you be offering or will you just let everything come out of Europe which is where the current bulk of ST support is based?*

*(Sam Tramiel) I am as frustrated as you are and probably more so. ...the present problem is that the DRAM problem is causing us great delivery problems and we cannot keep up with the demand in Europe and other parts of the world. We just signed a major deal with a big DRAM supplier and the situation will get better I hope in early 1989.*

*We will and do support developers all over the world and suggest that US developers learn how to export which would help themselves and the economy. I am sorry to see Compu'e drop the ST mag but I hope that they will revisit the issue when they see tens of thousands of STs sold monthly in the US...*

*continued on next page*

## Sam Tramiel on CompuServe

*continued from previous page*

Last month I was in Germany for the Annual Atari Fair in Dusseldorf. It was incredible, over 30,000 over the weekend.

*(Richard Mataka)* Sam, I think that that may be where your main problem is user support is excellent, however development support is very very strained...and it is the development people that you have to win over if you are going to be a serious computer competitor in the US.

*(Sam Tramiel)* We are not strained, and are happy to help anyone... I am sure once we are selling large quantities in the US any strains that exist will disappear. In the meanwhile, export to Europe. We do, and we like it!

*(Charles Medley)* What is the news on the 68030 TT?

*(Sam Tramiel)* We are working on the TT, and hope to show it in early '89. Until then, no further comments on the TT... but it will knock your socks off!

*(Steve Mortimer/NNQ)* Many developers and dealers are not going to support the ST anymore or are on the brink of that decision. It is essential to retain what support we have left. Will you consider advertising to increase awareness till the "big push" or sign up a national computer chain stocked with a few STs diverted from Europe?

*(Sam Tramiel)* We feel that advertising without product availability is helpful in selling our competitors' machines, and therefore, will just waste money.

As far as a national computer chain is concerned, we are already diverting machines to the US and shipping them to our few but loyal ST dealers...

*(Shawn Smiley)* Are you planning to make any additions to the ST like stereo sound and speech synthesis?

*(Sam Tramiel)* No comment. Sorry, but we do not want to promise new things until they are ready.

*(tc)* What about the portable ST? Fact or fiction?

*(Sam Tramiel)* Fact. We are working on it, and will ship it as soon as it is ready.

*(Steve Mortimer)* Do you foresee any major changes at Atari or the ST market in the near future... This includes the possibility of a revamped ST based on new technology like the 68020/30 while remaining ST compatible?

*(Sam Tramiel)* I hope so...we plan for Atari to be number two or number three in the world personal computer market and we hope to make the ST one of the standard machines in the US during 1989. I would prefer not to comment on details of future ST or TT machines at present.

*At the conclusion, Sam indicated another online conference would be scheduled in the near future. In his closing remarks he said, "I appreciate the support of all of you, and I really hope that in 1989, you will not be such a minority in the US personal computer world. It is a pleasure to see Atari so successful in Europe and I'm sure that with more DRAM as we expect in '89, we will be able to be successful in the U.S. as well."*

## Developers! Improve Distribution

Atari is compiling a product directory for dealers. Tell us how to contact your distributor(s) and we'll pass the information to Atari's authorized dealers. Make sure the right people know about your product!

Send the coupon below to Atari Computer, Sales Support, 1196 Borregas Avenue, Sunnyvale, CA 94086.

.....  
Company Name \_\_\_\_\_

Product \_\_\_\_\_

Distributor(s) \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Contact \_\_\_\_\_